# Acta Neuropathologica

Volume 80 · 1990

**Founding Editor** F. Seitelberger, Wien

**Editors**
K. Jellinger, Wien (Executive Editor)
P. Kleihues, Zürich
G. W. Kreutzberg, München
L. J. Rubinstein*, Charlottesville
J. M. Schröder, Aachen
M. Tomonaga*, Tokyo
H. M. Wisniewski, Staten Island

**Editorial Board**
H. Bernheimer, Wien
D. D. Bigner, Durham
W. Blakemore, Cambridge
H. Budka, Wien
A. N. Davison, London
R. Friede, Göttingen
F. Ikuta, Niigata
I. Klatzo, Bethesda
H. Lassmann, Wien
A. Lowenthal, Wilrijk
S. K. Ludwin, Kingston
W. G. P. Mair, London
L. Manuelidis, New Haven
J. M. Matthieu, Lausanne
B. S. Meldrum, London
V. ter Meulen, Würzburg
Y. Olsson, Uppsala
D. Price, Baltimore
K. Sandhoff, Bonn
P. Spencer, Portland
P. K. Thomas, London
M. Vandevelde, Bern
H. deF. Webster, Bethesda
H. Wekerle, Martinsried

* deceased

Springer International

Acta Neuropathologica was founded in 1961. Edited by **F. Seitelberger**. From Volume 31 (1975) edited by **K. Jellinger** and **F. Seitelberger**.

Organ of the Research Group for Neuropathology, of the Research Group for Comparative Neuropathology, and of the Research Group for Neurooncology of the World Federation of Neurology.

Submission of a manuscript implies: that the work described has not been published before (except in the form of an abstract or as part of a published lecture, review, or thesis); that it is not under consideration for publication elsewhere; that its publication has been approved by all coauthors, if any, as well as by the responsible authorities at the institute where the work has been carried out; that, if and when the manuscript is accepted for publication, the authors agree to automatic transfer of the copyright to the publisher; and that the manuscript will not be published elsewhere in any language without the consent of the copyright holders.

All articles published in this journal are protected by copyright, which covers the exclusive rights to reproduce and distribute the article (e.g., as offprints), as well as all translation rights. No material published in this journal may be reproduced photographically or stored on microfilm, in electronic data bases, video disks, etc., without first obtaining written permission from the publisher.

The use of general descriptive names, trade names, trademarks, etc., in this publication, even if not specifically identified, does not imply that these names are not protected by the relevant laws and regulations.

While the advice and information in this journal is believed to be true and accurate at the date of its going to press, neither the authors, the editors, nor the publisher can accept any legal responsibility for any errors or omissions that may be made. The publisher makes no warranty, express or implied, with respect to the material contained herein.

*Special regulations for photocopies in the USA*

Photocopies may be made for personal or in-house use beyond the limitations stipulated under Section 107 or 108 of U.S. Copyright Law, provided a fee is paid. This fee is US$ 0.20 per page, or a minimum of US$ 1.00 if an article contains fewer than five pages. All fees should be paid to the Copyright Clearance Center, Inc., 21 Congress Street, Salem, MA 01970, USA, stating the ISSN 0001-6322, the volume, and the first and last page numbers of each article copied. The copyright owner's consent does not include copying for general distribution, promotion, new works, or resale. In these cases, specific written permission must first be obtained from the publisher.

Springer-Verlag, Berlin Heidelberg New York

Springer-Verlag, Wien New York

Printed in Germany – © Springer-Verlag GmbH & Co. KG Berlin Heidelberg 1990

Printers: Wiesbadener Graphische Betriebe GmbH, W-6200 Wiesbaden, FRG

# *Contents*


Adams CWM, Poston RN: Macrophage histology in paraffin-embedded multiple sclerosis plaques is demonstrated by the monoclonal pan-macrophage marker HAM-56: correlation with chronicity of the lesion 208
Akai F → Yamamoto K
Akasaki Y, Takauchi S, Miyoshi K: Cerebellar degeneration induced by acetyl-ethyl-tetramethyl-tetralin(AETT) 129
Akiguchi I → Nakamura S
Althaus U → Glaus T
Altmannsberger M → Franke FE
Amano N → Iseki E
Amano N → Itoh Y
Amano N → Mizutani T
Anderton B → Langui D
Aranda C → Peña J

Balbo A → Koistinaho J
Bálint K → Slowik F
Bancher C → Popovitch ER
Barbier A → Bonnekoh P
Barcikowska M → Popovitch ER
Barrett R → Thomas FP
Bederson J → Lee KS
Beretta S → Vedeler CA
Beyreuther K → Walker LC
Bhattacharya S → Nicholson LVB
Bjerkås I → Hagen G
Blaauw G → Theunissen PHMH
Blakemore WF → Hagen G
Bogousslavsky J → Miklossy J
Bonnekoh P, Barbier A, Oschlies U, Hossmann K-A: Selective vulnerability in the gerbil hippocampus: morphological changes after 5-min ischemia and long survival times 18
Borg E → Jakobsson F
Bouldin TW → Murayama S
Braak H, Braak E: Neurofibrillary changes confined to the entorhinal region and an abundance of cortical amyloid in cases of presenile and senile dementia 479
Braak E → Braak H
Brengman JM → Yanagihara T
Brion J-P → Langui D
Brown HR, Goller NL, Rudelli RD, Merz GS, Wolfe GC, Wisniewski HM, Robakis NK: The mRNA encoding the scrapie agent protein is present in a variety of non-neuronal cells 1
Brück W, Friede RL: Anti-macrophage CR3 antibody blocks myelin phagocytosis by macrophages in vitro 415
Budka H → Ketzler S
Budka H → Maier H
Budka H → Morimura T
Budka H → Schmidbauer M
Busard HLSM, Gabreëls-Festen AAWM,

Caceres L → Taratuto AL
Callahan S → Kim YS
Carp RI → Kim YS
Chang Y, Soffer D, Horoupian DS, Weiss LM: Evolution of post-natal Herpes simplex virus encephalitis to multicystic encephalopathy 666
Choi BH → Suzuki M
Christie S → Lach B
Cole DJ, Drummond JC, Ghazal EA, Shapiro HM: A reversible component of cerebral injury as identified by the histochemical stain 2,3,5-triphenyl-tetrazolium chloride (TTC) 152
Czirják S → Slowik F

Davies P → Mattiace LA
Davis RL → Lee KS
Debets-Te Baerts M → Theunissen PHMH
Défossez A → Delacourte A
Delacourte A → Flament S
Delacourte A, Flament S, Dibe EM, Hublau P, Sablonnière B, Hémon B, Shérrer V, Défossez A: Pathological proteins Tau 64 and 69 are specifically expressed in the somatodendritic domain of the degenerating cortical neurons during Alzheimer's disease. Demonstration with a panel of antibodies against Tau proteins 111
Delaère P → Flament S
Dessanti P → Pesce C
Dey PK → Sharma HS
Dibe EM → Delacourte A
Dickson DW → Kure K
Dickson DW → Mattiace LA
Dickson DW → Suenaga T
Dieler R, Schröder JM: Abnormal sensory and motor reinnervation of rat muscle spindles following nerve transection and suture 163
Dieler R, Schröder JM, Skopnik H, Steinau G: Infantile hypertrophic pyloric stenosis: myopathic type 295
Dingemans KP → Troost D
Dormans JAMA → Geelen JAG
Doronzo R → Vedeler CA
Drummond JC → Cole DJ
Ducati A → Tomei G
Duyckaerts C → Flament S

Edström L → Jakobsson F
Eriksson L, Westermark P: Characterization of intracellular amyloid fibrils in the human choroid plexus epithelial cells 597

Fazekas I → Slowik F
Fetell MR → Thomas FP
Flament S → Delacourte A
Flament S, Delacourte A, Delaère P, Duyckaerts C, Hauw J-J: Correlation between microscopical changes and Tau 64 and 69 biochemical detection in senile dementia of the Alzheimer type. Tau 64 and 69 are reliable markers of the neurofibrillary degeneration 212
Foitl DR → Thomas FP
Franke FE, Altmannsberger M, Schachenmayr W: Metastasis of renal carcinoma colliding with glioblastoma. Carcinoma to glioma: an event only rarely detected 448
Friede RL → Brück W
Fumagalli G → Tomei G
Fyhr I-M → Oldfors A

Gabreëls FJM → Busard HLSM
Gabreëls-Festen AAWM → Busard HLSM
Galasko D → Masliah E
Gardner-Medwin D → Nicholson LVB
Gazsó L → Slowik F
Geelen JAG, Dormans JAMA, Verhoef A: The early effects of methylmercury on the developing rat brain 432
Gennarelli T → Tomei G
Geppert M, Ostertag CB, Seitz G, Kiessling M: Glucocorticoid therapy obscures the diagnosis of cerebral lymphoma 629
Ghazal EA → Cole DJ
Gibbels E, Kentenich M: Unmyelinated fibers in sural nerve biopsies of chronic inflammatory demyelinating polyneuropathy 439
Glaus T, Griot C, Richard A, Althaus U, Herschkowitz N, Vandevelde M: Ultrastructural and biochemical findings in brain cell cultures infected with canine distemper virus 59
Gocht A, Löhler J: Changes in glial cell markers in recent and old demyelinated lesions in central pontine myelinolysis 46
Goebel HH → Wisniewski KE
Goller NL → Brown HR
Goshko V → Ramsay DA
Goto S, Hirano A: Synaptophysin expression in the striatum in Huntington's disease 88
Goto S, Hirano A: Inhomogeneity of the putaminal lesion in striatonigral degeneration 204
Goto Y, Komiyama A, Tanabe Y, Katafuchi Y, Ohtaki E, Nonaka I: Myopathy in Marinesco-Sjögren syndrome: an ultrastructural study 123
Goto S → Kawana T
Goto S → Matsumoto S
Griot C → Glaus T
Guimaraes PO → Kim JH

Hagen G, Blakemore WF, Bjerkås I: Ultrastructural findings in spongy degeneration of white matter in silver foxes (*Vulpes vulpes*). A naturally occurring demyelinating disease with oligodendrocyte vacuolation 590
Haginoya K, Miyabayashi S, Iinuma K, Tada K: Mosaicism of mitochondria in mitochondrial myopathy: an electron-microscopic analysis of cytochrome *c* oxidase 642
Hallbrucker C → Maier H
Haltia M → Wisniewski KE
Hansen LA → Masliah E
Harata N → Konno H
Harris JB → Nicholson LVB
Hashimoto H → Sato M
Haug H → Ketzler S
Hauw J-J → Flament S

Hayakawa K → Mizutani T
Hayakawa T → Yamamoto K
Hays AP → Thomas FP
Hedley-Whyte ET → Louis DN
Hegreberg GA, Reed SM: Skeletal muscle changes associated with equine myotonic dystrophy 426
Hémon B → Delacourte A
Hersch SM → Kamei S
Herschkowitz N → Glaus T
Higgins RJ → Schrenzel MD
Hinokuma K, Ohama E, Ikuta F, Tanimura K, Kameyama S: Dural arteriovenous malformation with abnormal parenchymal vessels: an autopsy study 656
Hinrichs SH → Schrenzel MD
Hirai S → Okamoto K
Hirai S → Yamaguchi H
Hirano A → Goto S
Hirano A → Kato S
Hirano A → Matsumoto S
Hirano A → Suenaga T
Hirokawa K → Takahashi H
Hirose R → Kawana T
Holme E → Oldfors A
Horikawa Y → Oyanagi K
Horoupian DS → Chang Y
Hoshino T → Lee KS
Hossmann K-A → Bonnekoh P
Hublau P → Delacourte A

Ide C → Tohyama K
Ihara Y → Yamaguchi H
Iinuma K → Haginoya K
Ikeda K → Kawana T
Ikuta F → Hinokuma K
Ikuta F → Oyanagi K
Ikuta F → Takeda S
Imai T → Kusaka H
Ipsen S → Ulrich J
Iseki E, Matsushita M, Kosaka K, Suzuki K, Amano N, Saito A: Morphological characteristics of senile plaques in familial Alzheimer's disease 227
Ishihara T → Takahashi M
Itoh Y, Yagishita S, Amano N, Iwabuchi K: An autopsy case of peroneal muscular atrophy with rigidity and tremor. Ultrastructural and systematic morphometrical studies on peripheral nerves 671
Iwabuchi K → Itoh Y
Iwasa M → Kawai H
Iwasaki Y → Konno H
Izumo S → Umehara F

Jacobs JM, Scadding JW: Morphological changes in IgM paraproteinaemic neuropathy 77
Jänisch W → Paulus W
Jakobsson F, Borg K, Edström L: Fibre-type composition, structure and cytoskeletal protein location of fibres in anterior tibial muscle. Comparison between young adults and physically active aged humans 459
Jansen GH → Troost D
Janzer RC → Miklossy J
Jimi T, Wakayama Y: Effect of denervation on regenerating muscle plasma membrane integrity: freeze-fracture and dystrophin immunostaining analyses 401
Johansson O → Sharma HS
Johnson MA → Nicholson LVB
Jones D → Mann DMA

Kamai S, Hersch SM, Kurata T, Takei Y: Coxsackie B antigen in the central nervous system of a patient with fatal acute encephalitis: immunohistochemical studies of formalin-fixed paraffin-embedded tissue 216
Kameyama M → Nakamura S
Kameyama S → Hinokuma K
Katafuchi Y → Goto Y
Kato S, Hirano A: Ubiquitin and phosphorylated neurofilament epitopes in ballooned neurons of the extraocular muscle nuclei in a case of Werdnig-Hoffmann disease 334
Kawai H, Nishino H, Kusaka K, Naruo T, Tamaki Y, Iwasa M: Experimental glycerol myopathy: a histological study 192
Kawamata T → Nakamura S
Kawana T, Nada O, Hirose R, Ikeda K, Goto S, Taguchi T, Kubota M, Toyohara T, Suita S: Distribution of neuropeptide Y-like immunoreactivity in the normoganglionic and aganglionic segments of human colon 469
Kawashima K → Watanabe K
Kentenich M → Gibbels E
Ketzler S, Weis S, Haug H, Budka H: Loss of neurons in the frontal cortex in AIDS brains 92
Kiessling M → Geppert M
Kikuchi T, Mukoyama M, Yamazaki K, Moriya H
Axonal degeneration of ascending sensory neurons in gracile axonal dystrophy mutant mouse 145
Kim JH, Guimaraes PO, Shen MY, Masukawa LM, Spencer DD: Hippocampal neuronal density in temporal lobe epilepsy with and without gliomas 41
Kim KS → Wisniewski KE
Kim YS, Carp RI, Callahan S, Wisniewski HM: Incubation periods and histopathological changes in mice injected stereotaxically in different brain areas with the 87V scrapie strain 388
Kimura H → Nakamura S
Kitaguchi T → Wisniewski KE
Kitz K → Maier H
Kitz K → Morimura T
Knowles DM → Thomas FP
Koistinaho J, Wadhwani KC, Latker CH, Balbo A, Rapoport SI: Adrenergic innervation of blood vessels in rat tibial nerve during Wallerian degeneration 604
Komiyama A → Goto Y
Konno H, Yamamoto T, Suzuki H, Yamamoto H, Iwasaki Y, Ohara Y, Terunuma H, Harata N: Targeting of adoptively transferred experimental allergic encephalitis lesion at the sites of Wallerian degeneration 521
Kosaka F → Sato M
Kosaka K → Iseki E
Kraft D → Morimura T
Kubota M → Kawana T
Kuntzer T → Miklossy J
Kurashima C → Takahashi H
Kurata T → Kamei S
Kure K, Weidenheim KM, Lyman WD, Dickson DW: Morphology and distribution of HIV-1 gp41-positive microglia in subacute AIDS encephalitis. Pattern of involvement resembling a multisystem degeneration 393
Kusaka H, Matsumoto S, Imai T: An adult-onset case of sporadic motor neuron disease with basophilic inclusions 660
Kusaka K → Kawai H

Lach B, Christie S, Preston D: Chronic progressive and relapsing neuromyopathy with massive dilatations of endoplasmic reticulum in muscle fibers 611
Landi A → Tomei G
Langford LA, Owens GC: Resolution of the pathway taken by implanted Schwann cells to a spinal cord lesion by prior infection with a retrovirus encoding $\beta$-galactosidase 514
Langui D, Probst A, Anderton B, Brion J-P, Ulrich J: Aluminium-induced tangles in cultured rat neurones. Enhanced effect of aluminium by addition of maltol 649
Lapis K → Slowik F
Larocca LM → Michetti F
Larsson N-G → Oldfors A
Lassmann H → Morimura T
Latker CH → Koistinaho J
Latov N → Thomas FP
Lauriola L → Michetti F
Lee KS, Hoshino T, Rodriguez LA, Bederson J, Davis RL, Wilson CB: Bromodeoxyuridine labeling study of intracranial meningiomas: proliferative potential and recurrence 311
Llena JF → Suenaga T
Löhler J → Gocht A
Louis DN, Hedley-Whyte ET, Martuza RL: Sarcomatous proliferation of the vasculature in a subependymoma: a follow-up study of sarcomatous dedifferentiation 573
Ludwin SK: Oligodendrocyte survival in Wallerian degeneration 184
Ludwin SK: Phagocytosis in the rat optic nerve following Wallerian degeneration 266
Luque E → Peña J
Lyman WD → Kure K

Mæhlen J, Torvik A: Necrosis of granule cells of hippocampus in adrenocortical failure 85
Maier H, Morimura T, Öfner D, Hallbrucker C, Kitz K, Budka H: Argyrophilic nucleolar organizer region proteins (Ag-NORs) in human brain tumors: relations with grade of malignancy and proliferation indices 156
Mandybur TI: The distribution of Alzheimer's neurofibrillary tangles and gliosis in chronic subacute sclerosing panencephalitis 307

Mann DMA, Jones D, Prinja D, Purkiss MS: The prevalence of amyloid (A4) protein deposits within the cerebral and cerebellar cortex in Down's syndrome and Alzheimer's disease 318
Martin LJ → Pardo CA
Martuza RL → Louis DN
Masliah E, Galasko D, Wiley CA, Hansen LA: Lobar atrophy with dense-core (brain stem type) Lewy bodies in a patient with dementia 453
Maslinska D → Wisniewski KE
Masters C → Walker LC
Masukawa LM → Kim JH
Matre R → Vedeler CA
Matsumoto N → Takahashi M
Matsumoto S, Hirano A, Goto S: Ubiquitin-immunoreactive filamentous inclusions in anterior horn cells of Guamanian and non-Guamanian amyotrophic lateral sclerosis 233
Matsumoto S → Kusaka H
Matsushita M → Iseki E
Mattiace LA, Davies P, Yen S-H, Dickson DW: Microglia in cerebellar plaques in Alzheimer's disease 493
Meier E → Ulrich J
Meier-Ruge W → Ulrich J
Merz GS → Brown HR
Michetti F, Larocca LM, Rinelli A, Lauriola L: Immunocytochemical distribution of S-100 protein in patients with Down's syndrome 475
Miklossy J, Kuntzer T, Bogousslavsky J, Regli F, Janzer RC: Meningovascular form of neuroborreliosis: similarities between neuropathological findings in a case of Lyme disease and those occurring in tertiary neurosyphilis 568
Miller JR → Thomas FP
Miyabayashi S → Haginoya K
Miyoshi K → Akasaki Y
Mizutani T, Amano N, Sasaki H, Morimatsu Y, Mori H, Yoshimura M, Yamanouchi H, Hayakawa K, Shimada H: Senile dementia of Alzheimer type characterized by laminar neuronal loss exclusively in the hippocampus, parahippocampus and medial occipitotemporal cortex 575
Mogami H → Yamamoto K
Mori H → Mizutani T
Morimatsu Y → Mizutani T
Morimura T, Neuchrist C, Kitz K, Budka H, Scheiner O, Kraft D, Lassmann H: Monocyte subpopulations in human gliomas: expression of Fc and complement receptors and correlation with tumor proliferation 287
Morimura T → Maier H
Morita T → Oyanagi K
Moriya H → Kikuchi T
Mukoyama M → Kikuchi T
Murayama S, Bouldin TW, Suzuki K: Selective sparing of Betz cells in primary motor area in hypoxic-ischemic encephalopathy 560
Mushynski WE → Yanagihara T

Nada O → Kawana T
Nag S: Ultracytochemical localisation of $Na^+$, $K^+$-ATPase in cerebral endothelium in acute hypertension 7
Nag S → Ramsay DA
Nagai M → Watanabe K
Nakamura N → Nakamura S
Nakamura S, Kawamata T, Akiguchi I, Kameyama M, Nakamura N, Kimura H: Expression of monoamine oxidase B activity in astrocytes of senile plaques 419
Nakazato Y → Yamaguchi H
Naruo T → Kawai H
Neuchrist C → Morimura T
Nguyen KB → Pender MP
Nicholson LVB, Johnson MA, Gardner-Medwin D, Bhattacharya S, Harris JB: Heterogeneity of dystrophin expression in patients with Duchenne and Becker muscular dystrophy 239
Nishino H → Kawai H
Nonaka I → Goto Y

*Obituary* 692
Öfner D → Maier H
Ohama E → Hinokuma K
Ohama E → Oyanagi K
Ohama E → Takeda S
Ohara Y → Konno H
Ohtaki E → Goto Y
Okamoto K, Hirai S, Shoji M, Senoh Y, Yamazaki T: Axonal swellings in the corticospinal tracts in amyotrophic lateral sclerosis 222
Oldfors A, Fyhr I-M, Holme E, Larsson N-G, Tulinius M: Neuropathology in Kearns-Sayre syndrome 541
Olsson Y → Sharma HS
Osame M → Umehara F
Osawa T → Tohyama K
Oschlies U → Bonnekoh P
Ostertag CB → Geppert M
Owens GC → Langford LA
Oyanagi K, Wakabayashi K, Ohama E, Takeda S, Horikawa Y, Morita T, Ikuta F: Lewy bodies in the lower sacral parasympathetic neurons of a patient with Parkinson's disease 558

Pardo CA, Martin LJ, Troncoso JC, Price DL: The human pineal gland in aging and Alzheimer's disease: patterns of cytoskeletal antigen immunoreactivity 535
Pásztor E → Slowik F
Paulus W, Jänisch W: Clinicopathologic correlations in epithelial choroid plexus neoplasms: a study of 52 cases 635
Peña J, Aranda C, Luque E, Vaamonde R: Heroin-induced myopathy in rat skeletal muscle 72
Pender MP, Stanley GP, Yoong G, Nguyen KB: The neuropathology of chronic relapsing experimental allergic encephalomyelitis induced in the Lewis rat by inoculation with whole spinal cord and treatment with cyclosporin A 172
Pesce C, Provera P, Dessanti P, Provaggi MA: Densitometric analysis of the nerve cell population of the inferior olive in aging 95
Popovitch ER, Wisniewski HM, Barcikowska M, Silverman W, Bancher C, Sersen E, Wen GY: Alzheimer neuropathology in non-Down's syndrome mentally retarded adults 362
Poston RN → Adams CWM
Preston D → Lach B
Price DL → Pardo CA
Price DL → Walker LC
Prinja D → Mann DMA
Probst A → Langui D
Probst A → Ulrich J
Provaggi MA → Pesce C
Provera P → Pesce C
Purkiss MS → Mann DMA

Ramsay DA, Goshko V, Nag S Primary spinal leptomeningeal astrocytoma 338
Rapoport SI → Koistinaho J
Reed SM → Hegreberg GA
Regli F → Miklossy J
Renier WO → Busard HLSM
Richard A → Glaus T
Rinelli A → Michetti F
Robakis NK → Brown HR
Rodriguez LA → Lee KS
Rudelli RD → Brown HR

Sablonnière B → Delacourte A
Saccoliti M → Taratuto AL
Saito A → Iseki E
Sala C → Tomei G
Sasaki H → Mizutani T
Sato M, Hashimoto H, Kosaka F: Histological changes of neuronal damage in vegetative dogs induced by 18 minutes of complete global brain ischemia: two-phase damage of Purkinje cells and hippocampal CA1 pyramidal cells 527
Scadding JW → Jacobs JM
Scarpini E → Vedeler CA
Schachenmayr W → Franke FE
Scheiner O → Morimura T
Scheithauer BW: Tumors of the meninges: proposed modifications of the World Health Organization classification 343
Schmidbauer M, Budka H, Shah KV: Progressive multifocal leukoencephalopathy (PML) in AIDS and in the pre-AIDS era. A neuropathological comparison using immunocytochemistry and in situ DNA hybridization for virus detection 375
Schmidt B → Schröder JM
Schrenzel MD, Higgins RJ, Hinrichs SH, Smith MO, Torten M: Type C retroviral expression in spontaneous feline olfactory neuroblastomas 547
Schröder JM, Sommer C, Schmidt B: Desmin and actin associated with cytoplasmic bodies in skeletal muscle fibers: immunocytochemical and fine structural studies, with a note on unusual 18- to 20-nm filaments 406
Schröder JM → Dieler R
Schultz M → Taratuto AL
Seitz G → Geppert M
Senoh Y → Okamoto K
Sersen E → Popovitch ER
Sevlever G → Taratuto AL

Shah KV → Schmidbauer M
Shapiro HM → Cole DJ
Sharma HS, Westman J, Olsson Y, Johansson O, Dey PK: Increased 5-hydroxytryptamine immunoreactivity in traumatized spinal cord. An experimental study in the rat 12
Shen MY → Kim JH
Shérrer V → Delacourte A
Shibuya S → Wakayama Y
Shimada H → Mizutani T
Shoji M → Okamoto K
Shoji M → Yamaguchi H
Silverman W → Popovitch ER
Skopnik H → Dieler R
Slowik F, Fazekas I, Bálint K, Gazsó L, Pásztor E, Czirják S, Lapis K: Intrasellar hamartoma associated with pituitary adenoma 328
Smith MO → Schrenzel MD
Soffer D → Chang Y
Sommer C → Schröder JM
Spagnoli D → Tomei G
Spencer DD → Kim JH
Stanley GP → Pender MP
Steinau G → Dieler R
Suenaga T, Hirano A, Llena JF, Yen S-H, Dickson DW: Modified Bielschowsky stain and immunohistochemical studies on striatal plaques in Alzheimer's disease 280
Suita S → Kawana T
Suzuki H → Konno H
Suzuki K → Iseki E
Suzuki K → Murayama S
Suzuki M, Choi BH: The behavior of the extracellular matrix and the basal lamina during the repair of cryogenic injury in the adult rat cerebral cortex 355

Tada K → Haginoya K
Taguchi T → Kawana T
Takahashi H, Kurashima C, Utsuyama M, Hirokawa K: Immunohistological study of senile brains by using a monoclonal antibody recognizing $\beta$ amyloid precursor protein: significance of granular deposits in relation with senile plaques 260
Takahashi M, Ishihara T, Yokota T, Uchino F, Yokoyama T, Matsumoto N: A case of cerebral composite ganglioneuroblastoma: an immunohistochemical and ultrastructural study 98
Takauchi S → Akasaki Y
Takeda S, Ohama E, Ikuta F: Involvement of extraocular muscle in mitochondrial encephalomyopathy 118
Takeda S → Oyanagi K
Takei Y → Kamei S
Tamaki Y → Kawai H
Tanabe Y → Goto Y
Tanimura K → Hinokuma K
Taratuto AL, Sevlever G, Saccoliti M, Caceres L, Schultz M: Giant axonal neuropathy (GAN): an immunohistochemical and ultrastructural study report of a Latin American case 680
Terunuma H → Konno H
Theunissen PHMH, Debets-Te Baerts M, Blaauw G: Histogenesis of intracranial haemangiopericytoma and haemangioblastoma. An immunohistochemical study 68
Thomas FP, Vallejos U, Foitl DR, Miller JR, Barrett R, Fetell MR, Knowles DM, Latov N, Hays AP: B-cell small lymphocytic lymphoma and chronic lymphocytic leukemia with peripheral neuropathy: two cases with neuropathologic findings and lymphocyte marker analysis 198
Tohyama K, Ide C, Osawa T: Nerve regeneration through the cryoinjured allogeneic nerve graft in the rabbit 138
Tomei G, Spagnoli D, Ducati A, Landi A, Villani R, Fumagalli G, Sala C, Gennarelli T: Morphology and neurophysiology of focal axonal injury experimentally induced in the guinea pig optic nerve 506
Torten M → Schrenzel MD
Torvik A → Mæhlen J
Toyohara T → Kawana T
Troncoso JC → Pardo CA
Troost D, Jansen GH, Dingemans KP: Cerebral medulloepithelioma – electron microscopy and immunohistochemistry 103
Tulinius M → Oldfors A

Uchino F → Takahashi M
Ulrich J, Meier-Ruge W, Probst A, Meier E, Ipsen S: Senile plaques: staining for acetylcholinesterase and A4 protein: a comparative study in the hippocampus and entorhinal cortex 624
Ulrich J → Langui D
Umehara F, Izumo S, Zyounosono M, Osame M: An autopsied case of the Crow-Fukase syndrome: a neuropathological study with emphasis on spinal roots 563
Utsuyama M → Takahashi H

Vaamonde R → Peña J
Vallejos U → Thomas FP
Van Hoesen GW → Vogt BA
van 't Hof MA, Renier WO, Gabreëls FJM: Polyglucosan bodies in sural nerve biopsies 554
van 't Hof MA → Busard HLSM
Vandevelde M → Glaus T
Vedeler CA, Scarpini E, Beretta S, Doronzo R, Matre R: The ontogenesis of Fcγ receptors and complement receptors CR1 in human peripheral nerve 35
Verhoef A → Geelen JAG
Villani R → Tomei G
Vogt BA, Van Hoesen GW, Vogt LJ: Laminar distribution of neuron degeneration in posterior cingulate cortex in Alzheimer's disease 581
Vogt LJ → Vogt BA

Wadhwani KC → Koistinaho J
Wakabayashi K → Oyanagi K
Wakai S → Watanabe K
Wakayama Y, Shibuya S: Observations on the muscle plasma membrane-associated cytoskeletons of mdx mice by quick-freeze, deep-etch, rotary-shadow replica method 618
Wakayama Y → Jimi T
Walker LC, Masters C, Beyreuther K, Price DL: Amyloid in the brains of aged squirrel monkeys 381
Watanabe K, Nagai M, Wakai S, Arai T, Kawashima K: Loss of constitutional heterozygosity in chromosome 10 in human glioblastoma 251
Weidenheim KM → Kure K
Weis S → Ketzler S
Weiss LM → Chang Y
Wen GY → Popovitch ER
Westermark P → Eriksson L
Westman J → Sharma HS
Wiley CA → Masliah E
Wilson CB → Lee KS
Wisniewski HM → Brown HR
Wisniewski HM → Kim YS
Wisniewski HM → Popovitch ER
Wisniewski KE, Maslinska D: Lectin histochemistry in brains with juvenile form of neuronal ceroid-lipofuscinosis (Batten disease) 274
Wisniewski KE, Maslinska D, Kitaguchi T, Kim KS, Goebel HH, Haltia M: Topographic heterogeneity of amyloid B-protein epitopes in brains with various forms of neuronal ceroid lipofuscinoses suggesting defective processing of amyloid precursor protein 26
Wolfe GC → Brown HR

Yagishita Y → Itoh Y
Yamaguchi H, Nakazato Y, Shoji M, Ihara Y, Hirai S: Ultrastructure of the neuropil threads in the Alzheimer brain: their dendritic origin and accumulation in the senile plaques 368
Yamamoto H → Konno H
Yamamoto K, Hayakawa T, Mogami H, Akai F, Yanagihara T: Ultrastructural investigation of the CA1 region of the hippocampus after transient cerebral ischemia in gerbils 487
Yamamoto T → Konno H
Yamanouchi H → Mizutani T
Yamashima T, Yamashita J: Histological, ultrastructural and chromatographical discrimination of phospholipids in meningiomas 255
Yamashita J → Yamashima T
Yamazaki K → Kikuchi T
Yamazaki T → Okamoto K
Yanagihara T, Brengman JM, Mushynski WE: Differential vulnerability of microtubule components in cerebral ischemia 499
Yanagihara T → Yamamoto K
Yen S-H → Mattiace LA
Yen S-H → Suenaga T
Yokota T → Takahashi M
Yokoyama T → Takahashi M
Yoong G → Pender MP
Yoshimura M → Mizutani T

Zyounosono M → Umehara F

Indexed in *Current Contents*